This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Withdrawn).

2. (Withdrawn).

3. (Withdrawn).

4. (Withdrawn).

5. (Withdrawn).

6. (Withdrawn).

7. (Withdrawn).

8. (Withdrawn).

9. (Withdrawn).

10. (Withdrawn).

11. (Withdrawn).

12. (Withdrawn).

13. (Withdrawn).

14. (Withdrawn).

15. (Withdrawn).

16. (Withdrawn).

17. (Withdrawn).

18. (Withdrawn).

19. (Currently Amended). A resistance structure adapted to be formed on an integrated circuit, the resistance structure comprising:

a first layer of aluminum;

a layer of aluminum oxide, formed on top of said first layer of aluminum;

a second layer of aluminum, formed on top of said layer of aluminum oxide, configured such that said layer of aluminum oxide is sandwiched between said first and second layers of aluminum, forming a vertical resistance.

20. (Previously Presented). The structure as recited in claim ~~13~~ 19, wherein said second layer of aluminum is doped.

21. (Original). The structure as recited in claim 20, wherein said second layer of aluminum is doped with oxygen.

22. (Original). The structure as recited in claim 20, wherein said second aluminum layer is doped with nitrogen.

23. (Currently Amended). A resistance structure adapted to be formed on an integrated circuit, the resistance structure comprising:

a first layer of aluminum;

a layer of aluminum oxide defining an oxide layer, formed on top of said first layer of aluminum; and

a second layer formed on top of said oxidized layer, formed from a material selected to prevent superconducting tunneling, said structure forming a vertical resistance.

24. (Original). The resistance structure as recited in claim 23, wherein said material is at least 30 nm of aluminum.

25. (Original). The resistance structure as recited in claim 23, wherein said material is aluminum doped with paramagnetic impurities.

26. (Original). The resistance structure as recited in claim 23, wherein said material is aluminum doped with oxygen.

27. (Original). The resistance structure as recited in claim 23, wherein said material is aluminum doped with nitrogen.

28. (Original). The resistance structure as recited in claim 23, wherein said material is titanium.

29. (Original). The resistance structure as recited in claim 23, wherein said material is molybdenum.

30. (Original). The resistance structure as recited in claim 23, wherein said material is niobium nitride.

31. (Withdrawn).

32. (Withdrawn).

33. (Withdrawn).